Amendments To The Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (currently amended) A microcatheter system for infusion of a solution into a retinal vein or artery, wherein the microcatheter system remains within the retinal vein or artery during the infusion without an external holding device for at least a period of time required for a bolus injection,

wherein the microcatheter system comprises a flexible cannula mounted in a second cannula, wherein the flexible cannula is configured to be inserted into a retinal vein or artery and to remain in the retinal vein or artery during infusion and has an outer diameter less than about 100 μm and the second cannula is ~~are~~ configured ~~configured~~ to be inserted into the eye.

2. (currently amended) A microcatheter system comprising:

a flexible cannula for insertion into a retinal vein or artery lumen, whereby a solution is infused into the retinal vein or artery lumen through the flexible cannula and the flexible cannula remains within the retinal vein or artery lumen during the infusion without an external holding for at least a period of time required for a bolus injection; and

a second cannula, wherein the microcatheter system comprises a flexible cannula ~~is~~ at least partially encased in a second cannula, wherein the flexible cannula is configured to be inserted into a retinal vein or artery and to remain in the retinal vein or artery during infusion and has an outer diameter less than about 100 μm and the second cannula is ~~are~~ configured ~~configured~~ to be inserted into the eye.

3. (currently amended) A microcatheter system comprising:

a flexible cannula for insertion into a retinal vein or artery lumen, whereby a solution is infused into the retinal or artery lumen through the flexible cannula and the flexible cannula remains within the retinal vein or artery lumen during the infusion without an external holding device; and

a second cannula, wherein the microcatheter system comprises a flexible cannula is configured to be inserted into a retinal or artery and to remain in the retinal vein or artery during

infusion and has an outer diameter less than about 100 μm and is ~~are~~ mounted in the second cannula, wherein the flexible cannula and the second cannula are configured ~~configured~~ to be inserted into the eye.

4. (Original) The microcatheter system of any one of claims 1 through 3, wherein solution is infused at a flow rate of at least about 0.2 cc/min.

5. (currently amended) The microcatheter system of any one of claims 1 through 3, wherein the flexible cannula having a proximal end and a distal end and the distal end is sharp and rigid for puncturing the retinal vein or artery lumen.

6. (previously presented) The microcatheter system of claim 5, wherein the distal end has a beveled ramp-like shape.

7. (previously presented) The microcatheter system of claim 6, wherein the ramp-like distal end forms an angle of about 30°.

8. (previously presented) The microcatheter system of any one of claims 1 through 3, wherein the flexible cannula is fabricated of polyimide.

9. (canceled)

10. (original) The microcatheter system of claim 9, wherein the flexible cannula has an outer diameter of from about 50 μm to about 80 μm.

11. (original) The microcatheter system of claim 10, wherein the flexible cannula has an outer diameter of about 66 μm.

12. (previously presented) The microcatheter system of any one of claims 1 through 3, further comprising a second cannula having a larger diameter than the flexible cannula.

13. (original) The microcatheter system of claim 12, wherein the second cannula is less flexible than the flexible cannula.

14. (original) The microcatheter system of claim 12, wherein second cannula has a proximal end and a distal end, and a portion of the flexible cannula is housed within the distal end of the second cannula.

15. (original) The microcatheter system of claim 14, wherein the second cannula forms a fluid-tight seal about the flexible cannula.

16. (original) The microcatheter system of claim 12, wherein the proximal end of the second cannula is sized for attachment to the tip of a syringe through which solution is infused.

17. (original) The microcatheter system of claim 12, wherein the second cannula has an outer diameter that ranges from about 400 μm to about 800 μm.

18. (original) The microcatheter system of claim 17, wherein the second cannula has an outer diameter of about 556 μm.

19. (previously presented) The microcatheter system of claim 12, further comprising a modified microcannula system in which the flexible cannula and second cannula are mounted.

20. (canceled)

21. (previously presented) The microcatheter system of any one of claims 1 through 3, wherein the microcannula system further includes an inner plug mounted on the modified microcannula system and the inner plug is fabricated of silicone.

22. (previously presented) The microcatheter system of any one of claims 1 through 3, wherein the microcannula system further includes an inner plug mounted on the modified microcannula system and the inner plug has an aperture through which the second cannula and flexible cannula are inserted.

23. (previously presented) The microcatheter system of any one of claims 1 through 3, wherein the microcannula system further includes an inner plug mounted on the modified microcannula system and the inner plug forms a fluid-tight seal about the second cannula.

24. (previously presented) The microcatheter system of any one of claims 1 through 3, wherein the flexible cannula is illuminated for enhanced visibility.

25. (currently amended) The microcatheter system of any one of claims 1 through 3 wherein the microcatheter system or flexible cannula remains within the retinal vein or artery during the infusion without an external holding device for a period of time of at least 5 minutes.

26. (original) The microcatheter system of claim 25, wherein the period of time is at least 10 minutes.

27. (original) The microcatheter system of claim 26, wherein the period of time is at least 20 minutes.

28. (original) The microcatheter system of claim 27, wherein the period of time is at least 30 minutes.

29. (original) The microcatheter system of claim 28, wherein the period of time is at least 40 minutes.

30. (original) The microcatheter system of claim 29, wherein the period of time is at least 50 minutes.

31. (original) The microcatheter system of claim 30, wherein the period of time is at least one hour.

32. (original) The microcatheter system of claim 31, wherein the period of time is at least one and a half hours.

33. (original) The microcatheter system of claim 32, wherein the period of time is at least two hours.

34. (previously presented) A medical device kit, comprising one or more of the microcatheter systems of any one of claims 1 through 3.

35. (original) The kit of claim 34 wherein the one or more microcatheter systems are packaged in sterile condition.

36-38. (canceled)

39. (currently amended) A method for manual retinal vein or artery catheterization comprising inserting a microcatheter system within a retinal vein or artery and infusing solution into the retinal vein or artery, whereby the microcatheter system remains within the retinal vein or artery without an external holding device, wherein the microcatheter system comprises a flexible cannula mounted in a second cannula, wherein the flexible cannula and the second cannula are configured to be inserted into the eye.

40. (previously presented) The method of claim 39, wherein solution is infused at a flow rate of at least about 0.2 cc/min.

41. (previously presented) The method of claim 39, further comprising inserting a metal cannula into an incision in the eye prior to inserting the microcatheter system into the eye, whereby the microcatheter system is inserted into the eye through the metal cannula.

42. (original) The method of claim 41, further comprising insertion of a microcannula through the metal cannula, wherein the microcatheter system is inserted into the eye through the metal cannula.

43. (previously presented) The method of claim 39, further comprising the step of making four sclerotomies in the eye, whereby two microforceps are inserted in two of the sclerotomies and the microcatheter system is inserted into the eye through the fourth sclerotomy.

44. (currently amended) The method of claim 43, wherein the fourth sclerotomy site is made such that the microcatheter system is inserted into the eye with the flexible cannula approximately parallel to the retinal vein or artery.

45. (original) The method of claims 43 or 44, further comprising the step of using the microforceps to direct the flexible cannula towards the optic disc of the eye.

46. (currently amended) The method of claim 43, further comprising the steps of passing the microcatheter system back and forth between the microforceps to position the microcatheter system so that the distal end of the flexible cannula is approximately parallel to the retinal vein or artery.

47. (previously presented) The method of claim 39, wherein the microcatheter system further comprises a second cannula having a larger diameter than the flexible cannula, the second cannula having a proximal end and a distal end, whereby a portion of the flexible cannula is housed within the distal end of the second cannula.

48. (original) The method of claim 47, wherein the proximal end of the second cannula is attached to the tip of a syringe through which solution is infused, and the second cannula forms a fluid-tight seal about the flexible cannula.

49. (currently amended) The method of claim 39, wherein the microcatheter system or flexible cannula remains within the retinal vein or artery during the infusion without an external holding device for a period of time of at least 5 minutes.

50. (original) The method of claim 49, wherein the period of time is at least 10 minutes.

51. (original) The method of claim 50, wherein the period of time is at least 20 minutes.

52. (original) The method of claim 51, wherein the period of time is at least 30 minutes.

53. (original) The method of claim 52, wherein the period of time is at least 40 minutes.

54. (original) The method of claim 53, wherein the period of time is at least 50 minutes.

55. (original) The method of claim 54, wherein the period of time is at least one hour.

56. (original) The method of claim 55, wherein the period of time is at least one and a half hours.

57. (original) The method of claim 56, wherein the period of time is at least two hours.